

Title (en)
DISTRIBUTED RC TERMINATION

Title (de)
VERTEILTER RC-ABSCHLUSS

Title (fr)
TERMINAISON RC RÉPARTIE

Publication
EP 3432360 A1 20190123 (EN)

Application
EP 17305946 A 20170717

Priority
EP 17305946 A 20170717

Abstract (en)
An integrated resistor-capacitor (RC) structure (400) is disclosed. The integrated RC structure includes a vertical capacitor (302,402,306) and a resistive element (308,310) disposed above the capacitor. The integrated RC structure uses a low ohmic substrate (302) to ensure a good ground return path for the capacitor. Further, a resistivity of the substrate is configured such that a top plate (306) of the capacitor provides a reference ground above a predefined frequency. The impedance of the resistive element (308,310) is matched, relative to the reference ground, to a predetermined resistance. As such, the resistance of the resistive element (308,310) can be controlled to provide an impedance controlled RC structure over a range of operating frequencies.

IPC 8 full level
H01L 29/66 (2006.01); **H01L 27/06** (2006.01); **H01L 27/07** (2006.01); **H01L 29/94** (2006.01); **H01L 49/02** (2006.01)

CPC (source: EP US)
H01L 27/0682 (2013.01 - EP US); **H01L 27/0794** (2013.01 - EP US); **H01L 28/24** (2013.01 - EP US); **H01L 28/40** (2013.01 - US); **H01L 29/66181** (2013.01 - EP US); **H01L 29/94** (2013.01 - EP); **H01L 29/945** (2013.01 - US); **H01L 28/60** (2013.01 - EP)

Citation (search report)
• [X] US 2014197518 A1 20140717 - MAIORANA VITTORIO GIUSEPPE [IT], et al
• [X] EP 0700091 A2 19960306 - IBM [US]
• [A] US 2002020879 A1 20020221 - SHIIKI MIKA [JP], et al
• [T] US 4821007 A 19890411 - FIELDS WALTER D [US], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3432360 A1 20190123; CN 110945663 A 20200331; CN 110945663 B 20230919; JP 2020528216 A 20200917; JP 7143879 B2 20220929; TW 201909339 A 20190301; TW I761554 B 20220421; US 11164862 B2 20211102; US 2020152625 A1 20200514; WO 2019016587 A1 20190124

DOCDB simple family (application)
EP 17305946 A 20170717; CN 201880047819 A 20180716; IB 2018000742 W 20180716; JP 2020502148 A 20180716; TW 107124128 A 20180712; US 202016745798 A 20200117